

R E M A R K S

Claims 1 to 13 as set forth in Appendix I of this paper are herewith presented for further prosecution in this case. As indicated in the listing of the claims, Claims 1 to 9, 12 and 13 have been amended relative to the version of claims previously before the Examiner.

In addition to editorial changes in the wording of the claims, applicants have introduced a further explanation of the nature of the piping system (b) in the respective sections of Claims 1 and 9.<sup>2)</sup> No new matter has been added. Favorable consideration by the Examiner is respectfully solicited.

The Examiner objected to the drawings under 37 C.F.R. §1.83(a). It is respectfully noted that Rule 83(a) pertains to the "*drawings in a nonprovisional application*," and that the application as filed does not comprise any such drawings. The Examiner's respective objection is therefore deemed to be without basis and should be withdrawn. Favorable action is respectfully solicited.

However, to facilitate the Examiner's understanding of the particularities of applicants' invention, applicants herewith enclose schematic illustrations of some of the embodiments of the apparatus disclosed and claimed in the application.

The Examiner objected to Claims 2 and 12 for typographical errors in the representation of "°C". Applicants' amendment corrects the respective errors, and withdrawal of the objection is therefore respectfully solicited.

The Examiner rejected Claims 1 to 13 under 35 U.S.C. §112, ¶2, as being indefinite.

On the one hand, the Examiner pointed to a number of instances in Claims 1, 2, 7 and 8 where certain expressions were deemed to lack proper antecedent basis. Applicants have carefully reviewed the wording of the referenced sections to ensure that the provisions of Section 112, ¶2, are met. It is, however, respectfully noted that the failure to provide explicit antecedent basis for terms does not al-

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2) Cf. page 13, indicated lines 1 to 4, of the application.

ways render a claim indefinite. For example, inherent components of elements which are recited in the claims have been held to have antecedent basis in the recitation of the elements themselves.<sup>3)</sup> As such, a reference to a flow of a melt within a circulation line of a piping system (b) of the apparatus "from the direction of ..." or "in the direction of ..." is deemed to be inherent in the elements characterizing the piping system. Also,<sup>4)</sup>

*In rejecting a claim under the second paragraph of 35 U.S.C. 112, it is incumbent on the examiner to establish that one of ordinary skill in the pertinent art, when reading the claims in light of the supporting specification, would not have been able to ascertain with reasonable degree of precision and particularity the particular area set out and circumscribed by the claims.*

Therefore, without more, a mere statement that the antecedent basis for certain expressions is insufficient is not deemed to establish that a person of ordinary skill cannot ascertain the scope of the claim with a reasonable degree of precision and particularity.

As concerns Claims 7 and 8, applicants have revised the wording to further clarify that the piping system comprises

- a first section which is adapted to allow the melt to flow from the direction of the at least one reactor a) in the direction of the at least one apparatus c), and
- a second section which is adapted to allow the melt to flow from the direction of the at least one apparatus c) in the direction of the at least one reactor a),

to better bring out how the respective mean average pipe diameters are distinguished from one another.

Claim 9 has been amended to refer to a process, and Claim 13 has been corrected to depend upon Claim 9, to obviate the Examiner's respective concerns.

In light of the foregoing and the attached it is respectfully requested that the rejection under Section 112, ¶2, be withdrawn. Favorable action is solicited.

The Examiner rejected Claims 1, 2 and 4 under 35 U.S.C. §102(b) as being anticipated by the teaching of **Yamamoto et al.** (JP 09/020,828)

3) See *Bose Corp. v. JBL, Inc.*, 274 F.3d 1354, 1359, 61 USPQ2d 1216, 1218-19 (Fed. Cir 2001).

4) *Ex parte Wu*, 10 USPQ2d 2031 at 2033 (Bd. Pat. App. & Int. 1989).

arguing, inter alia, that the cooling system (6) of the prior art apparatus met the requirements of the piping system (b) specified applicants' claims.<sup>5)</sup> Applicants respectfully disagree.

As specifically recited in Claim 1, the piping system (b) "comprises at least one pipe which forms a circuit." Figure 1 as well as paragraphs [0009] to [0012] of the reference merely provide that (6) represents a cooling system without, however, providing information concerning the path on which the polymer melt is being conveyed within said cooling system. In particular, the reference fails to suggest or imply that the cooling system comprises at least one pipe which forms a circuit.

Anticipation under Section 102 can be found only if a reference shows exactly what is claimed, i.e., all material elements of the invention as claimed must be found in one prior art source,<sup>6)</sup> the elements must be shown in the reference in as much detail as is contained in the claim,<sup>7)</sup> and the elements must be shown in the reference in the part-to-part relationship which is set forth in the claim.<sup>8)</sup> In light of the shortcomings of **Yamamoto et al.**'s teaching concerning the cooling system (6), the reference cannot be deemed to describe all elements of applicants' apparatus in as much detail, or in the part-to-part relationship, as is contained in applicants' claims. It is therefore respectfully requested that the rejection of Claims 1, 2 and 4 under Section 102(a) in light of the teachings of **Yamamoto et al.** be withdrawn. Favorable action is solicited.

Further, the Examiner rejected Claims 1 to 3 and 6 under 35 U.S.C. §102(b) as being anticipated by the teaching of **Fields et al.** (US 6,224,805).

In this context, the Examiner pointed in particular to the channel (12),<sup>9)</sup> and to a pipe connecting a source (10) and a delivery means (14) of the prior art apparatus<sup>10)</sup> as a piping system. However, neither one of the referenced pipes is, or comprises, at least one

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5) Office action page 6, lines 12 and 13.

6) Cf. *In re Marshall*, 577 F.2d 301, 198 USPQ 344 (CCPA 1978); *In re Kalm*, 378 F.2d 959, 154 USPQ 10 (CCPA 1967).

7) Cf. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989).

8) Cf. *Lindemann Maschinenfabrik v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984).

9) Office action page 7, line 1.

10) Office action page 7, line 4.

pipe which forms a circuit as is required in accordance with the piping system (b) of applicants' claims. Also, and for clarity sake, it is noted that the "overflow" which is designated as (24) and (25) in Figure 4 of the reference is not conveyed via a pipe but merely indicates a melt flow covering the surface formed by the exterior of the die (20).<sup>11)</sup> As such, the teaching of **Fields et al.** also cannot be deemed to describe all elements of applicants' apparatus in the detail, or in the part-to-part relationship, as is set forth in applicants' claims. It is therefore respectfully requested that the rejection of Claims 1 to 3 and 6 under Section 102(a) in light of the teachings of **Fields et al.** be withdrawn. Favorable action is solicited.

The Examiner rejected Claim 5 under 35 U.S.C. §103(a) as being unpatentable in light of the teaching of **Yamamoto et al.** (*ibid.*) when taken in view of the disclosure of **Rawlings et al.** (US 4,517,138), taking the position that the primary reference showed all limitations of applicants' apparatus with the exception of apparatus (c) being a spinning apparatus,<sup>12)</sup> and arguing that a person of ordinary skill in the art would have been motivated to modify the primary reference to include an apparatus for spin casting such as addressed in the secondary reference.<sup>13)</sup>

Claim 5 depends upon Claim 1 and therefore equally requires the particularities of the piping system (b) addressed in the foregoing remarks concerning the teaching of **Yamamoto et al.** Moreover, if an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefrom is non-obvious.<sup>14)</sup> The disclosure of **Rawlings et al.** is not deemed to provide for a piping system which is connected to a reactor and an apparatus corresponding to the elements (a) and (c) of applicants' claims, and which comprises at least one pipe which forms at least one circuit. The modification which was proposed by the Examiner cannot be deemed to close the gap between applicants' apparatus and the apparatus of **Yamamoto et al.** Accordingly, even if a person of ordinary skill in the art were to adopt the Examiner's proposed modification, such a person would not arrive at the subject

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11) E.g., col. 5, indicated lines 36 to 42, of US 6,224,805.

12) Office action page 8, lines 8 to 11.

13) Office action page 8, line 12, to page 9, line 2.

14) *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

matter of applicants' Claim 1 and, correspondingly, the subject matter of Claim 5.

It is therefore respectfully requested that the rejection of Claim 5 under Section 103(a) be withdrawn. Favorable action is solicited.

The Examiner rejected Claims 3 and 6 under 35 U.S.C. §103(a) as being unpatentable in light of the teaching of *Yamamoto et al.* (*ibid.*) when taken in view of the disclosure of *Ishihara et al.* (JP 63/170,402).

Claims 3 and 6 depend upon Claim 1 and therefore also require the particularities of the piping system (b) which were addressed in the foregoing remarks. The disclosure of *Ishihara et al.* cannot be deemed to provide for a piping system which is located between a reactor and an apparatus corresponding to the elements (a) and (c) of applicants' claims, and which comprises at least one pipe which forms at least one circuit. Again, the modification which was proposed by the Examiner cannot be deemed to close the gap between applicants' apparatus and the apparatus of *Yamamoto et al.* concerning the piping system (b). Accordingly, even if a person of ordinary skill in the art were to adopt the Examiner's proposed modification, such a person would not arrive at the subject matter of applicants' Claim 1 and, correspondingly, the subject matter of Claims 3 and 6.

It is therefore respectfully requested that the rejection of Claims 3 and 6 under Section 103(a) be withdrawn. Favorable action is solicited.

Further, the Examiner rejected Claims 7 and 8 under 35 U.S.C. §103(a) as being unpatentable in light of the teaching of *Yamamoto et al.* (*ibid.*) when taken in view of the disclosure of *Walter et al.* (US 2,935,762).

Claims 7 and 8 depend upon Claim 1 and therefore also require the particularities of the piping system (b) which were addressed in the foregoing. The disclosure of *Walter et al.* cannot be deemed to provide for a piping system which is located between a reactor and an apparatus corresponding to the elements (a) and (c) of applicants' claims, and which comprises at least one pipe which forms at least one circuit. Again, the modification which was proposed by the Ex-

aminer cannot be deemed to close the gap between applicants' apparatus and the apparatus of **Yamamoto et al.** Accordingly, even if a person of ordinary skill in the art were to adopt the Examiner's proposed modification, such a person would not arrive at the subject matter of applicants' Claim 1 and, correspondingly, the subject matter of Claims 7 and 8.

It is therefore respectfully requested that the rejection of Claims 7 and 8 under Section 103(a) be withdrawn. Favorable action is solicited.

Last but not least, the Examiner rejected Claims 9 to 13 under 35 U.S.C. §103(a) as being unpatentable in light of the teaching of **Yamamoto et al.** (*ibid.*) when taken in view of the disclosures of **Walter et al.** (*ibid.*) and **Fields et al.** (*ibid.*).<sup>15)</sup>

The Examiner essentially took the position that the process defined in applicants' Claims 9 to 13 differed from the process as described in the teaching of **Yamamoto et al.** only in that the primary reference failed to teach a certain wall shear rate and flow velocity. Applicants respectfully disagree.

Claims 9 to 13 depend, either directly or indirectly, upon Claim 9,<sup>16)</sup> and if an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefrom is non-obvious.<sup>17)</sup> Also, Claims 9 to 13 specifically require that the process be conducted in an apparatus as claimed in Claim 1. As such, step (b) of applicants' process additionally requires that the melt of the thermoplastic polymer be moved through a piping system comprising at least one pipe which forms a circuit and which is suitable as circulation line for the polymer melt. As discussed in the foregoing, neither the teaching of **Yamamoto et al.** nor either one of the disclosures of **Walter et al.** and **Fields et al.** can be deemed to provide for a piping system which is located between a reactor and an apparatus corresponding to the elements (a) and (c) of applicants' Claim 1. A procedure which re-

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15) It is respectfully noted that the disclosure of **Fields et al.** was not mentioned in the rejection as set forth on page 11, lines 16 and 17, of the Office action, but was merely cited by the Examiner in the context of the arguments made on page 12, lines 15 to 21, of the Office action.

16) A dependent claim does not have to fall in the same category as the claim from which it depends. *Ex parte Porter*, 25 USPQ2d 1144, 1147 (Bd. Pat. App. & Int. 1992); *Ex parte Moelands*, 3 USPQ2d 1474, 1475 (Bd. Pat. App. & Int. 1987).

17) *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

sults from a modification of the teaching of the teaching of *Yamamoto et al.* in light of the disclosures of *Walter et al.* and *Fields et al.*, therefore, cannot reasonably be deemed to meet the requirements of subsection (b) of applicants' process.

It is therefore respectfully requested that the rejection of Claims 9 to 13 under Section 103(a) be withdrawn. Favorable action is solicited.